

Translation

PATENT COOPERATION TREATY

PCT/EP2003/003091



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 20454PCT-F/R	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/003091	International filing date (day/month/year) 25 March 2003 (25.03.2003)	Priority date (day/month/year) 25 March 2002 (25.03.2002)
International Patent Classification (IPC) or national classification and IPC C08G 69/04		
Applicant POLYMER ENGINEERING GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.  <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 14 October 2003 (14.10.2003)	Date of completion of this report 02 July 2004 (02.07.2004)
Name and mailing address of the IPEA/EP  Facsimile No.	Authorized officer  Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-6 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_ 1-7 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
pages \_\_\_\_\_ 1/1 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims		YES
	Claims	1 - 7	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 7	NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

### 2. Citations and explanations

Novelty and inventive step: WO97/45472 (D1) describes a production process for nylon 66 and copolyamides thereof, wherein the monomers adipic hexamethylenediamine and optionally caprolactam are pre-polymerised in a first process step in a pressure reactor (see drawing: 8), which is operated without removal of volatiles at a temperature of 180 to 280°C. The nylon is subsequently fed to further process steps, at the start of each of which the water which has evaporated is removed or expelled with inert gas (page 2, lines 6-11). The nylon melt is subsequently fed to a postcondensation reactor, where likewise water no longer needed is optionally expelled.

The claimed process also involves pre-polymerisation of the same monomers under the same conditions, the characterising feature being that the water is expelled in the further process step. This procedure appears similar to that described in D1. Claims 1-4 cannot therefore be acknowledged as novel over D1. Regarding device claims 5-7, the applicant is requested to explain what distinguishes the claimed device from that illustrated in D1.

Observations similar to those made with respect to D1 can

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also be made on the basis of WO97/21758 (D2). Here again condensation water and process water appear to be removed in a process step downstream of pre-polymerisation. In the opinion of the examining authority, the claimed process does not therefore appear to involve an inventive step with respect to D2 (PCT Article 33(2) and (3)).